



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to
Implement the Commission's
Procurement Incentive Framework and
to Examine the Integration of
Greenhouse Gas Emissions Standards
into Procurement Policies.

Rulemaking 06-04-009
(Filed April 13, 2006)

The California Energy Commission

Docket 07-OIIP-01

**COMMENTS OF THE DIVISION OF RATEPAYER ADVOCATES ON
THE ADMINISTRATIVE LAW JUDGES' RULING ON TYPE AND POINT
OF REGULATION ISSUES**

Pursuant to the November 9, 2007 "Administrative Law Judges' Ruling Requesting Comments on Type and Point of Regulation Issues",¹ DRA submits the following comments on the general type and point of regulation to be used to reduce greenhouse gas (GHG) emissions in the electricity sector.

I. INTRODUCTION

DRA appreciates the opportunity to comment on the complex set of issues surrounding the point and type of regulation, which will serve as the foundation of the California GHG policy program.

DRA believes that the CO₂RC methodology proposed by Western Resource Advocates (WRA) is a compelling one that merits further exploration by parties, the California Public Utilities Commission and the Energy Commission (Joint Commissions), and the Air Resources Board (ARB). The CO₂RC method addresses

¹ Administrative Law Judges' (ALJ) Ruling Requesting Comments on Type and Point of Regulation Issues (ALJ Ruling), November 9, 2007. A November 30, 2007 ALJ ruling subsequently extended the deadline for opening comments from November 28 to December 3.

many of the problems faced by the other regulation options, including the tracking of GHG emissions, the undermining of real GHG emissions reductions through contract shuffling or leakage, and potential legal risks. DRA recognizes that the current proceeding is under tight time constraints and that the point of regulation for the electricity sector is a fork-in-the road question facing the Joint Commissions. It is also critical that the route ultimately chosen by the ARB is the best option for meeting the mandates of AB 32. Thus, although WRA's proposal has emerged somewhat late in the course of Phase II of this proceeding, it should nevertheless be fully vetted by the Joint Commissions and parties, as the load-based and first-seller structures have been thus far.

Should the Commission reject WRA's proposal, it should adopt a source-based system for California while awaiting a federal and/or regional policy. The source-based approach will help avoid contract shuffling problems, thereby resulting in real reductions. Emissions from imported electricity would then be addressed when a regional or national system comes online. Finally, all of these point of regulation proposals will require additional quantitative analysis through the Commission's modeling phase in order to evaluate their costs and benefits.

DRA's responses to the questions in the ALJ Ruling are discussed below.

II. DISCUSSION

Section 3.1: General

Q1. What do you view as the incremental benefits of a market-based system for GHG compliance, in the current California context?

If fully functional and efficient, a market-based system has the advantage of *potentially* (depending ultimately on how allowances are allocated and/or sold) distributing emissions allowances to California entities at a price that sends the correct signal to market participants. One advantageous feature of a cap-and-trade system is that a reduction goal is established and enforced, in effect setting the quantity of emissions reductions to be achieved rather relying solely on reductions achievable through price regulation (i.e. a tax). Additionally, California has the added benefit of a potentially

robust, liquid market with numerous participants, particularly if such a market-based system includes all emitting sectors. The more robust the market, the less chance there is for market power and collusion to influence the price of GHG emissions allowances.

Nevertheless, many of these theoretical benefits of a cap-and-trade system also depend on its design elements. Assuming that GHG emissions allowances are allocated as efficiently and equitably as possible, an appropriate price signal should be sent to energy producers and consumers. The volatility and market distortions that initially occurred in the European Union's Emissions Trading System (EU ETS) demonstrate that market-based GHG trading regimes pose the risk of inequitable wealth transfers and pricing instability. Avoiding these unintended consequences requires careful mitigation from the start. These distortions would be less likely to result in a price-regulated regime such as a carbon tax system; however, the desired objective (a firm quantity of reductions) is a less certain outcome. DRA is aware of this market volatility risk and its potential impact on allowance values, but believes that an efficient market, with appropriate rules and regulations surrounding emissions allowance allocations will mitigate this risk.

Q2. Can a market-based system provide additional emissions reductions beyond existing policies and/or programs? If so, at what level? How much of such additional emission reductions could be achieved through expansion of existing policies and/or programs?

A correctly designed market-based system would provide additional emissions reductions beyond existing policies. However, DRA is not currently in a position to provide a detailed analysis that would conclusively and precisely demonstrate the alternative impacts that either a market-based program, or an expansion of existing programs, would have on emissions reductions. It is DRA's expectation and hope that the Commission's E3 modeling exercises and input from parties will yield a reliable set of estimated costs and benefits of alternative policy and program options in this regard. It is also DRA's expectation that rate impacts under the proposals would be considered a part of the modeling exercise.

As discussed further in these comments, DRA also recognizes the benefit of refraining from developing a market-based California system until a comparable Western regional or federal system is in place. If there is reasonable assurance that such a program is imminent, it makes sense to implement an interim regime that is adaptable and expandable to other states. The question of whether the Commission's Renewable Portfolio Standard, energy efficiency, distributed generation, and prescriptive procurement programs can be cost-effectively expanded to generate emissions reductions in the absence of a cap and trade scheme for the electricity sector becomes critical in this situation. DRA believes that a market-based GHG program, working in conjunction with existing policies and programs, is likely the best way to achieve additional GHG emissions reductions that are not cost-prohibitive. Furthermore, it is not clear that there is sufficient transmission infrastructure in place to accommodate the revised RPS objectives of the Commission, let alone to achieve the reductions that would need to be reached in the absence of a market-based GHG emissions reduction scheme. Again, the Commission's modeling exercise should provide a more accurate picture of whether and to what extent this is true.²

Section 3.2: Principles or Objectives to be Considered in Evaluating Design Options

- Q3. Do you agree with this set of objectives? Are there other objectives or principles that you wish to see included? If so, please include your recommendations and reasoning. Finally, please rank the objectives above, and any additional factors you propose, in order of importance.

DRA generally agrees with this set of objectives as listed in the November 9, 2007 ruling, and has no additional comments on those objectives at this time.

² The California Energy Commission's "2007 Integrated Energy Policy Report" also attempts to model the effects of expanding existing policies on GHG emissions reductions and may serve as a starting point in this analysis.

Section 3.3 Load Based Cap-and-Trade System Design

- Q4. With a load-based cap-and-trade system, should exports from in-state generation sources be included and accounted for under the cap? Why or why not? If so, how? For example, exports could be captured in a cap-and-trade system by regulating in-state sources that export, or by counting the emissions associated with exported power, without any compliance obligation on the exporter. There may be other options as well.

By definition, a load-based regulatory approach would require emission compliance only by retail electricity providers serving the California load. Whether to include exports from in-state generation sources under the cap would depend on (i) the percentage of electricity exports relative to the total generation serving California load, and (ii) how exports are calculated in the determination of the 1990 baseline emission level. Given that exports of in-state generation are relatively small,³ development of a separate system to track and regulate the emissions associated with exported power may not be cost-effective.⁴

- Q5. How extensive do you view the threat of contract-shuffling under a load-based program, given the accessibility of clean resources within the western interconnect? What mechanisms do you propose to combat this possibility? On what basis do you support your position?

As noted in the Market Advisory Committee final report, both the load-based and first-seller approaches are equally susceptible to contract shuffling, a problem associated

³ Based on CEC data, the total reported imports from both the Pacific Northwest and the Southwest region (excluding generation from Mohave or Intermountain) ranged between 68,000 GWh to 71,100 GWh between 2002 and 2005. For the same period of time, the total reported exports to these regions ranged between 4,800 GWh to 6,500 GWh. (“Proposed Methodology to Estimate the Generation Resource Mix of California Electricity Imports”, CEC Staff Paper, May 2006, Appendix A – Reported Imports and Exports)

⁴ Under AB 32, the ARB is required to consider cost effectiveness and the administrative burden of implementing GHG emission reduction regulations. Health and Safety Code Section 38561 (b).

with imported power.⁵ While SB 1368 prohibits California retail providers from entering long-term baseload contracts with facilities that do not meet the California emission performance standard, Bushnell et al. noted that this rule can be easily circumvented given the surplus of clean power available in neighboring states.⁶ In the absence of GHG emissions regulations outside of California, “[f]urther expansion of coal capacity in states like Nevada could free up low-carbon sources currently consumed in these states for sale into California.”⁷

Bushnell’s analysis was completed prior to the announcement by the member states of the Western Climate Initiative to achieve an aggregate GHG emissions reduction of 15% below 2005 levels by 2020.⁸ Nevada has still not announced its intent to reduce GHG emissions. Given the WCI commitment, DRA expects that the extent of contract shuffling would be limited in the long term, but would still likely be a problem over the next 5 to 10 years.

To combat contract shuffling, DRA recommends that staff from the ARB, CPUC, and CEC continue to work with other WCI states to adopt meaningful emission targets,⁹ while maintaining a dialogue with the non-participating states, urging them to take action in advance of a prospective federal legislation on GHG reduction.

- Q6. Under a load-based system, three basic options may be used to match a retail provider’s load to the sources of electricity used to serve the load: (1) use of contracts and settlement data, (2) the development of a tracking system to facilitate matching sources to loads, with unclaimed sources pooled and assigned, and (3) the use of a tracking

⁵ “Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California”, Market Advisory Committee final report to the California Air Resources Board, June 30, 2007, p.44.

⁶ “California’s Greenhouse Gas Policies: Local Solutions to a Global Problem?”, J. Bushnell, C. Peterman, C. Wolfram, April 2007, p.6.

⁷ *Id.*, p.6.

⁸ Western Climate Initiative Statement of Regional Goal, August 22, 2007.

⁹ Utah and Montana have not yet announced GHG reduction targets.

system and tradable emission attribute certificates (TEAC).

(1) Relying only on contracts and settlement data would not require the expense of creating a separate source-to-sink tracking system. However, emission information for system purchases through the day-ahead and real-time markets and for non-unit-specific power contracts would remain unknown.

(2) The use of a tracking system to match source to loads is administratively burdensome and likely unreliable. As many have pointed out, tagging electrons is technically infeasible. Contract shuffling will continue as long as there are incentives for generators and power marketers to do so. Also, the use of a default or imputed emissions rate for unspecified power will induce high-carbon generation to be masked as unspecified power, unless the default emissions rate is set at the highest emitting rate of existing generation. The combination of contract shuffling and usage of an imputed emissions rate undermines the environmental integrity of the overall emissions cap.

(3) The “Tradable Emissions Attribute Credit” or “TEAC” methodology would, assign TEACs to each generator based on its net generation and verified emissions rate.¹⁰ LSEs in turn are required to purchase and surrender TEACs equivalent to their load served. Since TEACs can be traded separately from electricity, there is no need to track the flow of generation from source to sink. Also, since the cost of pollution is internalized at the generator level, the CAISO markets can operate as designed. However, as Gillenwater and Breidenich observe, the TEACs system would work effectively only if all states within the Western Interconnect adopt this load-based approach, or if the supply of certificates is equivalent to the load-served in the capped market. For California, which is a net importer of power, a key issue is how to limit the purchase of out-of-state certificates to the quantity of net imported power.

¹⁰ “Internalizing carbon costs in electricity markets: Using certificates in a load-based emissions trading scheme,” Michael Gillenwater and Clare Breidenich, August 2007.

The TEAC approach appears very similar to the CO₂RC method proposed by WRA.¹¹ WRA proposed a number of options to describe how the CO₂RC method might work in a WECC context when some states lag behind others in participating in a region-wide cap-and-trade program. Under this method, there also appear to be few obstacles to linking the Western states deploying a load-based regulatory scheme with the RGGI states that have adopted a source-based cap and trade system.

If the Commission intends to pursue a load-based regulatory approach, DRA recommends adoption of an approach along the lines of the CO₂RC/TEAC based on their administrative simplicity and their compatibility with other source-based regimes.

- Q7. If a load-based approach is pursued, would the potential benefits of a full TEAC system be great enough to warrant the start-up and administrative costs?

See response to Question 6.

Section 3.4.1 Pure-Sourced Source-based

- Q8. Do you view this approach as compliant with Assembly Bill (AB) 32? Please support your answer.

Yes. Section 38530 of the Health and Safety Code requires the Air Resources Board to adopt regulations that “account for greenhouse gas emissions from all electricity consumed in the state,” including imports. Section 38505(m) includes within the definition of “Statewide greenhouse gas emissions” all electricity delivered to and consumed in California, for purposes of reducing emissions to their 1990 level by 2020. However, the Global Warming Solutions Action of 2006 does not appear to require direct regulation of emissions associated with imported electricity, as long as the goal of reducing emissions to the 1990 level by 2020 is achieved.

- Q9. In light of the relatively high capacity factors of carbon-intensive facilities outside the state, how extensive do you expect the short-term threat of substituting higher-carbon

¹¹ WRA Opening Comments on allowance allocation issues, October 30, 2007.

imports for in-state generation to be? Might this possibility be dealt with through specific program design (e.g., allocations, limiting conditions, etc.)?

The extent of non-regulated high-carbon imports substituting for regulated in-state generation depends largely on transmission system constraints and the availability of existing, uncommitted out-of-state generation.¹² Between 2002 and 2006, out-of-state imports ranged between 21.7% and 23.1% of California's total gross system power.¹³ Existing capacity on transmission lines are at times already fully subscribed. In particular, the Western Congestion Assessment Task Force has identified the WECC paths between Arizona and California (Path 49 and Path 46) as well as between Northwest and California (Path 65 and Path 66) to be highly congested.¹⁴ Based on the western interconnect transmission projects currently under planning, it is unlikely that leakage in the form of out-of-state generation substituting for in-state generation would be pervasive in the short term under a source-based scheme.¹⁵ Moreover, among significant out-of-state transmission capacity additions being considered, one of the largest is the PG&E/PNW/Canada project, which is targeting access to renewables and hydro-shaping.

A full analysis of the extent of leakage will require a comprehensive model that considers existing bilateral contracts within the WECC, existing generation resources, projected demand, available transmission paths, as well as generation and transmission resources under planning. It is unrealistic to expect the development of such a model to determine the extent of leakage, or contract shuffling, that may occur under the different regulatory schemes prior to the Joint Commissions' decision on the point of regulation. To achieve the goals of AB 32 in the most effective way, DRA recommends that the joint

¹² The construction of new out-of-state carbon-intensive generation resources to serve California load is ruled out by the recently enacted Emission Performance Standard (EPS).

¹³ http://www.energy.ca.gov/electricity/2002_gross_system_power.html.

¹⁴ <http://www.caiso.com/17f0/17f0b80c37070.pdf>.

¹⁵ The other form of leakage, namely the migration of facilities from within California to other states, has been taking place prior to the enactment of AB 32, as corporations are motivated to take advantage of the
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Commissions continue to work closely with the Western Climate Initiative and other WECC states to institute emission performance standards and other procurement policies to reduce GHG emissions in the electricity sector.

Q10. Given existing procurement oversight and the prospect for a regional or federal GHG program in the foreseeable future, how extensive do you expect the threat to be of a longer-term shift of production to regions beyond the reach of a California source-based cap-and-trade regime?

Under a regional program, as with the current Western Climate Initiative (WCI), each state will adopt its own GHG reduction goals, with some states having less aggressive goals than others. For example, while California aims to reduce its GHG emissions to the 1990 levels by 2020, Arizona, another member of the WCI, has chosen 2000 levels as its 2020 target. These less stringent goals, combined with the possibility of a grandfathering scheme of emission allowances, can potentially allow local carbon-intensive generators to continue operations without interruptions. It is conceivable that, in the unlikely event of low load-growth scenario (given that Arizona is one of the fastest growing regions in the U.S.), Arizona will continue to export excess coal-based electricity generation to California in the medium term.

In the long term, new low-carbon-based and more efficient generation will replace retiring plants that are coal-fired. Given that the current generation fleet in California is already mostly gas-fired while those in the Southwest states are still heavily coal-based;¹⁶ these same states have more “headroom” to build new generation to export to California while meeting their emission reduction goals. In other words, one can expect a shift of production of gas-fired power plants to regions outside of California. The extent of such a shift, however, will be limited by transmission system constraints.

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lower rent or labor costs outside of California.

¹⁶ For example, the generation mix of APS, the largest electric utility in Arizona, is 54.8% coal, 40.1% nuclear, 4.9% natural gas, and 0.2% hydro/solar. In contrast, California’s in-state generation mix in 2005 is 12.4% coal, 15.2% hydro, 42.2% natural gas, 15.9% nuclear, and 13.6% renewables.

Q11. If emissions associated with imported power are excluded from a cap-and-trade program, what policies beyond the existing suite of program including energy efficiency, California Solar Initiative, RPS, and Emission Performance Standard (EPS) do you recommend that California employ to achieve the necessary reductions from the electricity sector?

To the suite of programs mentioned above, DRA would add the PUC's and CEC's prescriptive influence over IOU and municipal utility resource plans in general. That is, apart from RPS compliance and other related policy a program, the state is concerned with gas supply and price risk. Therefore, the state may require utilities to procure in a certain way, utilizing risk management and portfolio planning tools, in order to mitigate those risks. For instance, California's Resource Adequacy (RA) program can also be a factor by facilitating load-based demand response programs, opposed to the continued siting of gas-burning combustion turbines (CTs).

Probably the most cost-effective complementary strategy to ratepayer-funded energy efficiency programs has been the development and implementation of building standards (Title 24) and appliance efficiency standards (Title 20) through the CEC, as legislatively mandated in 1978. Subsequent legislation (AB549, Statute of 2001) required that the CEC investigate options and develop a plan to decrease wasteful peak load energy consumption in existing residential and nonresidential buildings. The CEC published a report "Options for Energy Efficiency for Existing Buildings" in December 2005 and recommended that California institute a home energy ratings disclosure at the time a house is sold. This is based on findings from a prior study¹⁷ that older dwellings (i.e. built before 1996) have a much lower penetration of energy efficient appliances than new dwellings, including programmable thermostats, wall and attic insulation, double-pane windows, and similar measures. DRA recommends that the CEC continue to work with other government agencies to implement a time-of-sale home energy ratings disclosure program. To take this one step further, California can institute a minimum home energy rating requirement for home resales exceeding a specific assessment value

or square footage. In other words, depending on the value or size of the existing home, a prospective buyer of an existing residential unit may be required to retrofit the unit to meet a minimum energy rating (the higher the energy rating, the more energy efficient the unit) before the title can be transferred.

Vigorous enforcement of the building and appliance standards is another area that deserves attention and funding support. Noncompliance with building and appliance standards undermines the codes and standards work undertaken by the CEC. A recent study¹⁸ has shown that there is significant non-compliance with the building and appliance standards across California. Among commercial and industrial appliances, noncompliance rate for unit heaters and duct furnaces is estimated at 44%, while that of refrigerated vending machines is 63%. Noncompliance rates for residential and non-residential duct replacements are found to be nearly 100%, while window replacements in residential buildings are estimated to be 68% noncompliant. DRA recommends that resources be set aside for CEC to work with other state agencies and city building departments to ensure compliance with the building and appliance standards.

Q12. As the Public Utilities Commission does not currently have authority to oversee all energy efficiency and renewable procurement programs for all kinds of retail providers (investor owned utilities (IOUs), community choice aggregators (CCAs), electric service providers (ESPs), and publicly owned utilities (POUs)), which agency(ies) should fill in any gaps? Which agency should be responsible for overseeing energy efficiency and renewable procurement for POUs? Would the California Air Resources Board (ARB) have the authority to require certain energy efficiency and renewable targets be met by POUs?

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¹⁷ California Statewide Residential Appliance Saturation Study Final Report, June 2004.

¹⁸ Statewide Codes and Standards Market Adoption and Noncompliance Rates, prepared for Southern California Edison, May 10, 2007, Quantec LLC.

DRA currently does not have any recommendations regarding which government agency should be overseeing energy efficiency and renewable procurement for the POUs. CEC has significant policy influence over the resource planning and procurement activities of the municipal utilities. As DRA and other parties have discussed in previous comments, under a source-based cap the price of CO₂ is internalized and reflected in the cost of power to the LSEs. Thus, there will be an important price signal that favors energy efficiency, renewables, and so on. For the non-IOUs this price effect will be a significant policy instrument. Even under a load-based cap, to the extent we are successful in tracking CO₂; all LSEs will have a reduction target to meet and will seek least cost clean alternatives to achieve this.

Q13. What sources would a source-based system cover? Could it cover California utility-owned facilities located outside of California?

A source-based system should cover all in-state sources of generation. The only exemption to in-state generation that the Joint Commissions should consider is a de minimis exemption based on size.

It appears that based on statute and practice, facilities located outside of California that are majority-owned or operated by a California utility could potentially be covered by a source-based system. Under the California Public Utilities Code, public utilities include “electrical corporations”, which are defined to include: “every corporation or person owning, controlling, managing or operating any electrical plant for compensation *within this state*” (emphasis added), excluding certain statutorily defined exceptions.¹⁹ While this definition could be interpreted to exclude out-of-state plants, it would not exclude the owners or operators of such plants, if those owners were already “electrical corporations” based on their activities and holdings within California. Further, California’s authority to supervise and regulate California’s utilities could be interpreted

¹⁹ Cal. Pub. Util. Code § 218(a); *see also* Cal. Pub. Util. Code § 216.

to mean that the application of a source-based approach would include the out-of-state facilities that are owned or operated by California utilities.²⁰

A legal issue that might be raised is in this context is whether the application of a source-based system to California utility-owned facilities located outside of California would violate the dormant Commerce Clause as an impermissibly extraterritorial regulation. D.07-01-039 articulates the standard for impermissibly extraterritorial regulation:

Like facially discriminatory regulations, an “extraterritorial” regulation is generally considered to be invalid per se. In this context, extraterritorial regulation means regulation that impacts commerce that occurs “wholly” outside the state (internal citations omitted).²¹

In the context of certificates of public convenience and necessity, the CPUC through its regulation of California utilities, has asserted its reach over out-of-state facilities that are owned by California utilities. In D.88005, the CPUC found that:

There is no burden imposed on interstate commerce by this Commission's consideration, in a certification proceeding, of a California utility's out-of-state plant *producing a product or commodity to be consumed by California ratepayers* (emphasis added).²²

Based on the fact that the service or commodity to be produced by the out-of-state facility at issue was for California ratepayers, the CPUC concluded that the Commerce Clause was not violated.²³

The CPUC has also scrutinized costs allocated to ratepayers involving the health and safety practices of out-of-state, California utility-owned facilities. For instance, in *Mohave Coal Plant Accident*, D.94-03-048, the CPUC investigated a blast that killed six

²⁰ See Cal. Pub. Util. Code §§ 701, 761.

²¹ D.07-01-039 at 220.

²² 82 CPUC 775, 792.

²³ *Id.*

people and injured 10 others.²⁴ The blast had occurred at the currently-retired Mohave Generating Station in Laughlin, Nevada, which was owned and operated by Southern California Edison.²⁵

These cases demonstrate that the CPUC has asserted its reach over, and scrutinized, facilities located outside of California that are majority-owned or operated by a California utility. The usage by California ratepayers of output from California utility-owned, out-of-state facilities appears to be relevant in such analyses. The fact that a given out-of-state facility is California-utility owned or operated could be sufficient to determine that regulation of such facilities, through the California utility, is not “wholly” extraterritorial, and thus not in violation of the dormant Commerce Clause.²⁶ Thus, a source-based system could potentially be applied to out-of-state, California utility-owned facilities.²⁷

Q14. Would a strengthened EPS assist in reducing emissions due to California imports? What recommended changes would you make to the EPS?

Rather than recommending changes to the EPS adopted by the CPUC and the CEC that is currently deemed consistent with the requirements and definitions of SB 1368, DRA recommends that the CPUC and CEC consider reassessment of the allowed emission rate, currently set at 1,100 lbs/MWh every three years, for as long as the EPS remains in effect. The EPS performance level, as dictated by SB 1368, should be set at “no higher” than the GHG emission rate of a combined cycle gas turbine (CCGT) baseload powerplant.²⁸ As the efficiency of new CCGT plants, especially smaller-sized

²⁴ 1994 Cal. PUC LEXIS 216.

²⁵ *Id.*

²⁶ If an out-of-state facility is only partially, but not majority, owned by a California utility, the application of a source-based system to such a facility would be more problematic.

²⁷ Application of a source-based system to public-owned utilities’ out-of-state facilities is less clear. While CARB or the CEC could invoke an analogous argument, their jurisdiction over public-owned utilities is less pervasive than the CPUC’s jurisdiction over investor-owned utilities.

²⁸ In light of SB 1368’s grandfathering provisions for CCGT powerplants that are already in operation, the
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CCGTs,²⁹ continues to improve, it would be appropriate to ratchet down the allowed emission rate of the EPS.

Additionally, DRA recommends that California work closely with other states within the WECC to adopt an EPS governing the LSEs' long-term financial commitments to baseload generation. As stated in D.07-01-039, the objective of an EPS is to avoid "backsliding" as California transitions to a statewide GHG emissions cap.³⁰ Such an EPS can be implemented by the public utility regulatory agency within each state in the absence of a legislative mandate. Assuming that all the WECC states adopt an EPS, then one can expect that over time existing coal-based generation resources will be replaced by clean generation technologies, and that the issues related to leakage and contract shuffling will be peripheral.

Section 3.4.2 Deliverer/First Seller

Q15. Please comment on the "First Seller Design Description" paper, which is Attachment A to this ruling. Does the paper accurately describe the deliverer/first seller program? If not, describe your concerns and include an accurate description from your perspective.

The attached "First Seller Design Description" (First Seller Description) accurately describes the first-seller approach as proposed by the Market Advisory Committee, and provides an accurate listing of the multitude of market participants that this first-seller approach would affect. Specifically, Resero observes that given "the diversity of First Seller entities, and First Seller transactions, it may be more challenging to assess the carbon content of import transactions by reviewing contracts under a First

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adopted EPS level does not reflect the performance of the older and less efficient CCGT power plants.

²⁹ D.07-01-039 stated that an EPS standard of 1,000 lbs/MWh was initially deemed reasonable in the Proposed Decision, but in the Final Decision, the Commission adopted a rate of 1,100 lbs/MWh that would allow a "small amount of leeway" to account for "smaller-sized CCGTs utilizing new technologies, as well as the variability in heat rates based on altitude and ambient temperature where the facility is located." (D.07-01-039, p.68)

³⁰ *Id.*, p.24.

Seller approach than would be the case under a Load-Based approach.”³¹ Resero’s First Seller Description also concludes that the assignment of generic carbon levels to sources under either a load-based or first-seller approach have similar policy implications, advantages, and disadvantages.³² The Commission should keep this in mind when evaluating the purported advantages of the first-seller approach asserted by certain parties in this proceeding. Given that the tracking of carbon is likely to be equally challenging under either point of regulation, and that the regulatory compliance issues will multiply with the numerous first sellers in the market, the Commission should avoid a first-seller approach for California at this time. This recommendation is further supported by Resero’s finding that tracking carbon is likely to be similarly challenging between the two alternative points of regulation, and that the NERC e-tagging system is relatively limited in mitigating some of these carbon tracking issues.³³

Section 3.4.3 Source-based for In-State Generation, Load-based for imports

Q16. Please describe in detail your view of how this option would work.

This hybrid source- and load-based approach for in-state generation and imports would separately regulate generators and LSEs in an attempt to mitigate some of the tracking issues associated with electricity imports, while also sharing the burden of regulation. Thus, it would simultaneously require all of the reporting and tracking protocols associated with a strictly load-based system to account for imports, as well as the regulatory enforcement and compliance standards for generators associated with a source-based approach.

Q17. Do you support such an approach? Why or why not?

³¹ “First Seller Design Description,” Resero Consulting (First Seller Description), October 24, 2007, at 5.

³² Id. at 10-11.

³³ See Table 1 at 10.

DRA does not support this approach, as it would be replete with many of the disadvantages of a strictly load-based system, and would introduce even greater administrative and enforcement complexity that could serve to undermine the effectiveness of the program. The challenges associated with the reporting, tracking, compliance, and enforcement associated with both systems would remain should the Commission attempt this dual-regulatory approach, and yet the benefits to this approach are unclear. At minimum DRA believes the joint Commissions and ARB need to understand and quantify the trade-offs between a source-based *only in California* system that relies on energy efficiency, RPS, distributed generation, California Solar Initiative, prescriptive procurement, and advanced building and appliance standards to mitigate imports of unclean power against the hybrid source-based within California and load-based for imports model.

Q18. Does this approach have legal issues associated with it?
Provide a detailed analysis and legal citations.

DRA refrains from offering a legal analysis on this hybrid approach at this time but reserves the right to provide reply comments on this area.

Q19. If retail providers are responsible for internalizing the cost of carbon for imported power, all power generated in-state may need to be tracked to load to avoid double regulation of in-state power. Do you agree?

Yes, DRA agrees with this assumption.

Q20. If that is the case, does a mixed source-based/load-based approach offer any advantages compared to a load-based approach in terms of simplifying reporting and tracking? What if the load-based system uses TEACs? How could imports be differentiated from in-state generation in a way that reduces the complexity of reporting and tracking compared to a load-based approach?

DRA does not believe that reporting and tracking difficulties for imports can be simplified enough to make this hybrid approach worthwhile, and does not support this proposal.

Section 3.5 Deferral of a Market-based Cap-and-Trade

Q21. How important is it that a cap-and-trade system be included in the near-term as part of the electricity sector's AB 32 compliance strategy?

From a holistic perspective, it seems advantageous to make sure the electricity sector is included in any cap-and-trade program in California. The electricity sector has good opportunities for emission reductions, so its inclusion in a cap-and-trade system should, in theory, lower overall compliance costs.

From the perspective of the electricity sector, however, a cap-and-trade system is only beneficial if it truly does reduce emissions. If leakage and contract shuffling issues greatly undermine reduction efforts, then a cap-and-trade system would result only in reductions on paper. If this is the case, then a cap and trade program is certainly not important in the near term. In this situation, it might be beneficial to wait until a regional or national program is in place, and, in the meantime, rely on other strategies to reduce electricity emissions.

The real issue, then, is how much leakage and contract shuffling will undermine a cap and trade system. All possible points of regulation have the potential to inadvertently result in some level of leakage/contract shuffling. However, not all emission reductions can be undermined by these means. First, some existing contracts are long-term and cannot be 'shuffled.' Second, there are transmission constraints. Third, not all of the low-carbon energy in neighboring states will be available to California, as other states implement their own carbon and renewables requirements.

The extent to which each of these factors inhibits contract shuffling is a big unknown at this point. However, there are some causes for concern. Regarding transmission constraints, it is currently impossible to import more than a quarter of

California's energy needs (currently, imports comprise about a fifth of the state's energy). However, those imports represent approximately half of California's emissions. Swapping those contracts with lower-carbon electricity contracts would be enough to meet the mandates of AB 32 without causing any real reductions.³⁴ This situation is relevant to under the first-seller and load-based approaches.

Q22. Would your answer to Q12 be different if there is no market-based cap-and-trade system? If so, please explain.

DRA has no comment.

Q23. Address the following:

- How emission reduction obligations could be met if there is no cap-and-trade system for the electricity sector,

Emission reductions will come from three sources, regardless of regulatory option: (1) reducing electricity demand, (2) improving energy efficiency at the generation/transmission level, (3) replacing high-carbon sources with lower-carbon sources.

An alternative would be to mandate improvements or targets in these three areas. What is lost in theoretical economic efficiency could be gained through ease of implementation and greater difficulty in 'getting around' the system. However, it would rely on the wisdom of the regulator to choose the most efficient, least cost means to achieve reductions without the benefit of market signals.

Options include:

(1) Demand reduction – increase promotion of energy efficiency measures, including subsidization of products, building codes, public education campaign and similar programs.

³⁴ Bushnell, Jim, Carla Peterman, and Catherine Wolfram. "California's Green Gas Policies: Local Solutions to a Global Problem?" University of California Energy Institute, Center for the Study of Energy Markets. 2007.

(2) Improving operational efficiency at the generator level: Related efforts might include R&D. However, generator efficiency is already high, so additional savings in this area might be limited.

(3) Increasing use of low-carbon energy sources: Strengthen the RPS further, and create new incentives to replace coal with natural gas. However, a limiting factor would be transmission constraints to bring in low-carbon power from out of state. Also, any incentives should extend to out-of-state generation that serves California. This strategy could be adopted in part through requirements on the long-term procurement plan (LTPP).

- How increased programmatic goals would impact rates, and

These increased programmatic goals would likely increase the cost of electricity, although the extent this would occur is difficult to assess without a comprehensive modeling exercise. However, these approaches would not necessarily increase rates more than rate increases under a cap-and-trade program. Although in theory, cap-and-trade programs are more economically efficient, many real life implementation factors will influence the true cost and effectiveness of the program. If the cap-and-trade program is complex and difficult to administer, and requires extensive monitoring and analysis, the administration costs could be high. In this situation, the savings in administration costs may make alternatives more attractive. Additionally, if the cap-and-trade program is subverted by severe leakage or contract shuffling problems, then cost-effective “reductions” may only occur on paper. In this situation, more expensive reductions under an alternative strategy may be more desirable because those reductions would be real.

However, the marginal costs of reductions from energy efficiency and renewables efforts will increase as the amount of reductions increase. That is, the easiest and least expensive changes are made first, so additional reductions will become more and more costly. Usually, markets are more capable of finding these alternatives than are regulators operating without price signals. At some point, additional efficiency and renewables

efforts maybe become extremely expensive, in which case it would be beneficial to be part of a multi-sector cap-and-trade program. Other sectors may be able to more cheaply reduce emissions, avoiding severely high costs to the electricity sector.

- How deferral of a cap-and-trade program for the electricity sector would facilitate or hinder California's integration into a subsequent regional or federal program.

Deferral of a cap-and-trade program may seem desirable from the perspective of avoiding contract shuffling and leakage issues. Waiting for a regional or national system would eliminate the need for California to address contract shuffling and leakage on a stand alone basis.

However, DRA cautions against assuming that other cap-and-trade systems are imminent. Despite the progress of the WCI, and the apparent support of member states' governors, it is important to remember that actual implementation of a trading system will require state legislative support, which may or may not be forthcoming in a timely fashion. Additionally, with energy costs already rising and economists predicting a slow-down in our economy, any program that could raise energy costs may be politically less favorable. DRA is optimistic that the WCI or national program is on the horizon, but also recognizes that their associated timelines for implementation are uncertain.

Thus, despite the uncertain federal timeframe for a cohesive national policy program, DRA believes that a California market-based program for the electricity sector can yield meaningful emissions reductions in the meantime. In addition, including the electricity sector in the broad emissions allowance market should help to make the market deeper and more liquid, thereby reducing the potential for market power, collusion, and price volatility. Finally, including the electricity sector in an efficient market-based system for other emitting sectors is preferable to the alternative of waiting for a regional or federal program and hoping that the Commission's other already costly policy programs can help the electricity sector reach the objectives of AB 32.

Q24. How deferral of a cap-and-trade program for the electricity sector would facilitate or hinder

California's integration into a subsequent regional or federal program.

Please see response to Question 23.

Q25. If neither a regional system nor a national system is implemented within a reasonable timeframe, should California proceed with implementing its own cap-and-trade system for the electricity sector? If so, how long should California wait for other systems to develop before acting alone?

As discussed in Question 23, deferring a cap-and-trade system until a regional or national system is in place could simply defer it indefinitely. One goal of AB 32 is for California to serve as a model. A "wait-and-see" attitude is not the most productive example to set.

Q26. What flexible compliance mechanisms could be integrated into a non-market based GHG emission reduction approach?

DRA has no comment at this time.

Q27. If a market-based cap-and-trade system is not implemented for the electricity sector in 2012, how would you recommend addressing early actions that entities may have undertaken in anticipation of a market?

This question is difficult to answer without a firm idea of system would be implemented in place of a cap-and-trade system. However, under certain alternative systems, early actions might be automatically taken into account under the regulation scheme. Even if this is not the case, the electricity sector is likely to be subjected to cap-and-trade regulation at some point (i.e., under a national or regional system), in which case early actions may well be rewarded.

Section 3.6 Recommendation and Comparison of Alternatives

- Q29. Submit your comprehensive proposal for the approach California should utilize regarding the point of regulation and whether California should implement a cap-and-trade program at this time for the electricity sector. If you recommend that another approach be considered besides those detailed above, propose it here. If you recommend one of the above options, give as detailed a discussion as possible of how the approach would work.

DRA urges the Commission to seriously consider WRA's CO₂RC proposal in its decision to determine the point of regulation for the electricity sector. On the surface, the CO₂RC method seems to meet all the criteria for evaluating GHG program design options listed in the ALJ ruling. In contrast, the load-based approach is subject to contract shuffling while requiring the development of a comprehensive source-to-sink tracking system. The load-based approach has also been criticized for interfering with the operations of the CAISO markets and is considered incompatible with other source-based regime. The source-based approach, while internalizing the cost of carbon at the generation level, is potentially undermined by leakages and may also result in a shift of production to regions outside of California. The 1st seller approach is subjected to the same contract shuffling problems as the load-based approach, while having an inherent legal risk when attempting to regulate out-of-state entities. The CO₂RC method, as described in the WRA paper, has distinct advantages over the other options:

- Administrative simplicity. Since the CO₂RC method directly monitors the emissions attributed to each generation source based on its emission rate and output, it eliminates the need to track contract-paths for all existing bilateral contracts and the need to specify unreliable default emission factors. Additionally, the CO₂RC method eliminates the need to determine allowance allocations in a fair and equitable manner, and also obviates the need to design allowance auction.

- Real reductions. The CO₂RC method is not subjected to the same leakage or contract shuffling problems that face the other approaches....
- Compatibility with other systems. While the CO₂RC method is essentially a load-based regulation system, it is nevertheless compatible with the source-based system currently adopted by RGGI. Each emission credit representing one tonne of GHG emission reduction is tradable with an allowance credit representing also one tonne of GHG emission reduction.
- Low legal risk. Because it does not attempt to regulate extra jurisdictional entities, the CO₂RC method avoids the legal issues associated with the first-seller approach.

DRA recognizes that there may well be drawbacks to this method as well. Some of the outstanding issues include how to address the potential transfer of wealth from WCI participating states to non-WCI participating states, whether to continue the trading market for renewable energy credits when CO₂RC becomes operational, how to adjust the LSEs' CO₂RC requirements to account for new retail providers. It is thus important that the CO₂RC proposal be subjected to the same level of scrutiny that the other regulation options have faced. DRA recommends that the Joint Commissions request that the Market Advisory Committee (MAC) convene a special session to consider the CO₂RC method and provides its recommendations to the ARB and Joint Commissions by mid January. This will accommodate one additional round of comments by parties to the proceeding on the MAC recommendations prior to the issuance of a draft decision on the point and type of regulation for the electricity sector in mid February.

DRA recognizes these are tight timelines, and that parties may be feeling fatigued by the multiple sets of questions related to the various points of regulation. However, it would be imprudent to adopt an inferior regulation option just because momentum is carrying us in that direction. The CO₂RC proposal has enough merit to justify a serious assessment by stakeholders.

Should the Commission decide that the CO₂RC method is not a viable option or that there is inadequate time to consider this new approach, DRA favors a source-based

regulatory approach over the other options that have been discussed to date. DRA expects that the opportunity for leakage in terms of total GHG emitted is greater than the opportunity for contract shuffling. Given that California currently imports 20% of its energy from out-of-state generation, and assuming that 50% of the imports are coal-based, the opportunity for contract shuffling represents 10% of the total energy served. It is unlikely that the transmission system between California and other WECC states can accommodate additional imports equivalent to 10% of the California energy consumption.

Assuming that the extent of leakage is equivalent to that of contract shuffling, a source-based approach for California is administratively more straightforward than a load-based approach, and can be more easily transitioned into a regional/national market-based system. Tracking of GHG emissions at the unit or plant level is far simpler and accurate than tracking the flow of electricity from source to sink for all sources serving California load. Generators are already familiar with emissions reporting regulations and a national SO₂ trading market. Additionally, the legal risk of regulating imported electricity remains a potential barrier to implementing a load-based system.

A source-based regulatory scheme can indeed be very effective if it is adopted by other states. The leakage issue is a temporary inconvenience, but in the foreseeable future, when all WECC states join in the WCI, or national GHG emission reduction legislation becomes enacted, whichever comes first, this problem will resolve on its own.

III. CONCLUSION

DRA respectfully respects that recommendations as set forth herein and incorporate them into the final reporting protocol.

Respectfully submitted,

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Dated: December 3, 2007

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of “**COMMENTS OF THE DIVISION OF RATEPAYER ADVOCATES ON THE ADMINISTRATIVE LAW JUDGES’ RULING ON TYPE AND POINT OF REGULATION ISSUES**” in **R.06-04-009** and **CEC Docket 07-OIIP-01** by using the following service:

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Executed on December 3, 2007 at San Francisco, California.

/s/ Angelita Marinda
Angelita Marinda

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